```
=> fil hcap
FILE 'HCAPLUS' ENTERED AT 15:25:55 ON 16 JAN 2007
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
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FILE COVERS 1907 - 16 Jan 2007  VOL 146 ISS 4
FILE LAST UPDATED: 15 Jan 2007  (20070115/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

=> s l51
L58           1 L51

=> s l52
L59           3 L52

=> s l53
L60           4 L53

=> fil hcap
FILE 'HCAPLUS' ENTERED AT 15:26:16 ON 16 JAN 2007
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2007 AMERICAN CHEMICAL SOCIETY (ACS)
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FILE COVERS 1907 - 16 Jan 2007  VOL 146 ISS 4
FILE LAST UPDATED: 15 Jan 2007  (20070115/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

=> d que l58
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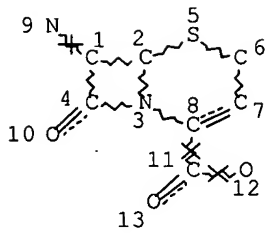
L1 STR



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DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
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NUMBER OF NODES IS 13

STEREO ATTRIBUTES: NONE
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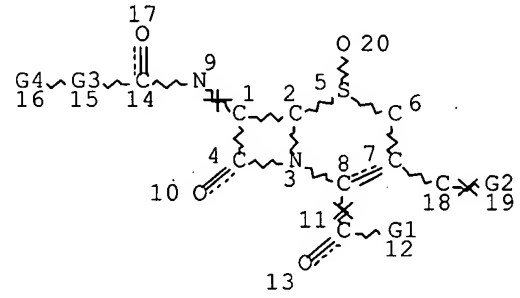
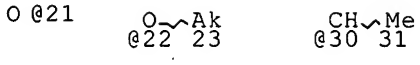
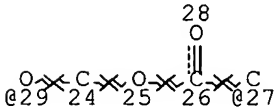
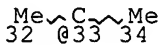
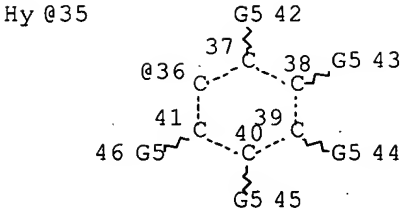
L40 STR











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VAR G5=H/ME
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ECOUNT IS E4 C E1 S AT 35

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NUMBER OF NODES IS 46

STEREO ATTRIBUTES: NONE
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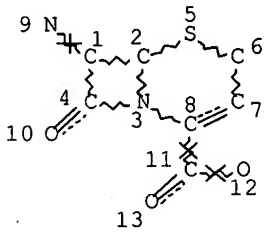
L51 1 SEA FILE=REGISTRY ABB=ON PLU=ON L42 AND OC5-C6-C6/ES
L58 1 SEA FILE=HCAPLUS ABB=ON PLU=ON L51

=> d que l59
L1 STR



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DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

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NUMBER OF NODES IS 13

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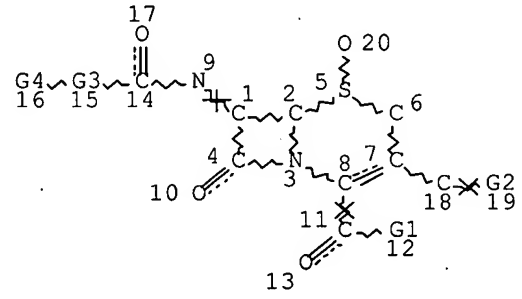

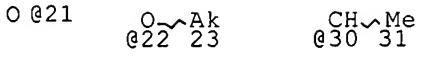

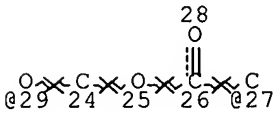

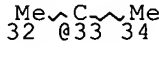

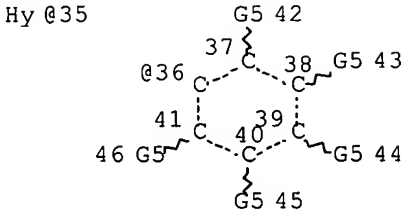

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VAR G5=H/ME
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CONNECT IS E1  RC AT  23
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS X5 C  AT  23
ECOUNT  IS E4 C  E1 S  AT  35

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  46

STEREO ATTRIBUTES: NONE
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L59           3 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L52


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L1              STR
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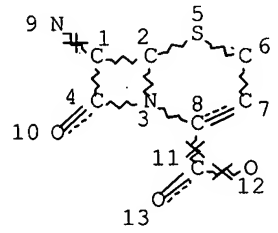


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GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
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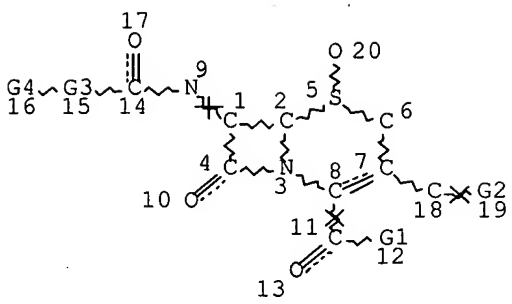

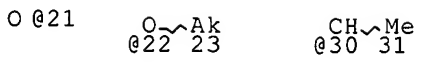

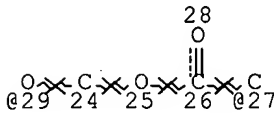

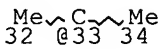

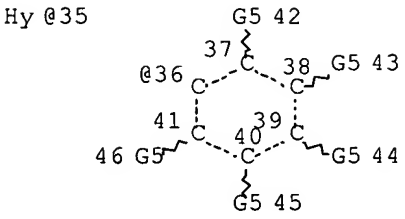

VAR G1=21/22/29/27
VAR G2=C/N
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NODE ATTRIBUTES:
CONNECT IS M3 RC AT 7
CONNECT IS E1 RC AT 21
CONNECT IS E1 RC AT 23
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED
ECOUNT IS X5 C AT 23
ECOUNT IS E4 C E1 S AT 35

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RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 46

STEREO ATTRIBUTES: NONE
L42 40 SEA FILE=REGISTRY SUB=L3 SSS FUL L40
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L60 4 SEA FILE=HCAPLUS ABB=ON PLU=ON L53

=> s l58-60
L61 6 (L58 OR L59 OR L60)

=> d l61 ibib abs hitstr tot

L61 ANSWER 1 OF 6 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:571011 HCAPLUS Full-text
DOCUMENT NUMBER: 143:93614
TITLE: In vivo assays for enzyme activity using liposome encapsulating chromogenic substrate to facilitate intracellular delivery
INVENTOR(S): Graham, Ronald J.; Sekar, Michael; Barbisin, Maura
PATENT ASSIGNEE(S): Applera Corporation, USA

SOURCE: PCT Int. Appl., 54 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005059163	A2	20050630	WO 2004-US42639	20041215
WO 2005059163	A3	20051229		
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RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2005244907	A1	20051103	US 2004-14447	20041215
EP 1704244	A2	20060927	EP 2004-814782	20041215
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS				

PRIORITY APPLN. INFO.:
US 2003-529953P P 20031215
US 2004-542425P P 20040206
WO 2004-US42639 W 20041215

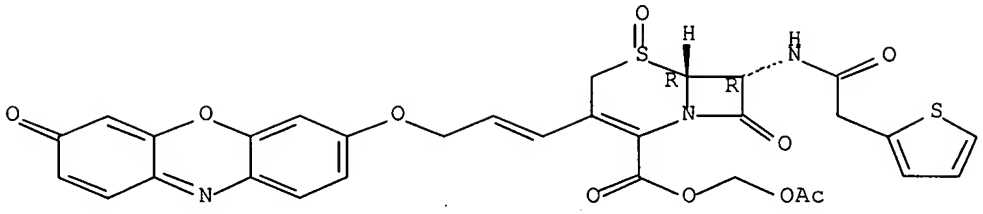
AB The present disclosure relates to methods for detecting an activity of one or more enzymes in a cell. In some embodiments, a cell is contacted with a liposome containing a substrate capable of producing a detectable light signal when acted upon by the enzyme, and detecting the amount of a light signal in the cell, wherein the amount indicates a level of the enzyme activity in the cell. Encapsulation in a liposome facilitates intracellular delivery of substrate. The methods can be used in screening agents that can inhibit or activate an enzyme activity. The methods can also be used in various downstream assays such the detection of interactions between intracellular proteins, screening for variants of an enzyme, and detection of various diseases. Compns. and kits for carrying out the various methods are also provided. These results show that liposomes containing a substrate capable of generating a fluorescent signal when acted on by /-galactosidase can be used to detect activity of this enzyme in cells and can be used to determine the presence or absence of this activity in various cell types.

IT ***452280-31-8 609812-89-7***, 8-Oxo-3-[3-[(2-oxo-2H-1-benzopyran-7-yl)oxy]-1-propenyl]-7-[(phenylacetyl)amino]-5-oxide (6R,7R)-(9CI)
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(in vivo assays for enzyme activity using liposome encapsulating chromogenic substrate to facilitate intracellular delivery)

RN 452280-31-8 HCAPLUS

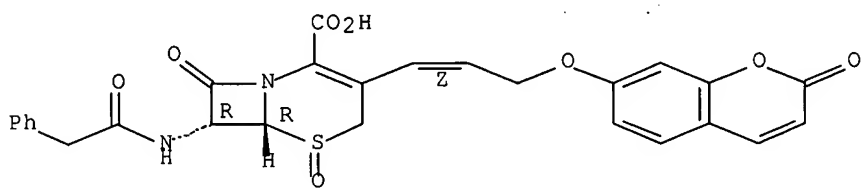
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 8-oxo-3-[3-[(3-oxo-3H-phenoxazin-7-yl)oxy]-1-propenyl]-7-[(2-thienylacetyl)amino]-, (acetyloxy)methyl ester, 5-oxide, (6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



RN 609812-89-7 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 8-oxo-3-[(1Z)-3-[(2-oxo-2H-1-benzopyran-7-yl)oxy]-1-propenyl]-7-[(phenylacetyl)amino]-, 5-oxide, (6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



L61 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:474830 HCAPLUS Full-text
DOCUMENT NUMBER: 143:22126
TITLE: Fluorogenic β-lactamase substrate containing a phenolic dye and vinylogous cephalosporin, and use for monitoring β-lactamase reporter gene expression
INVENTOR(S): Tsien, Roger Y.; Rao, Jianghong
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 40 pp., Cont.-in-part of U.S. Ser. No. 44,486.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005118669	A1	20050602	US 2004-884019	20040702
US 2003003526	A1	20030102	US 2002-44486	20020111
US 2005181469	A1	20050818	US 2005-93399	20050329
WO 2006085978	A2	20060817	WO 2005-US23947	20050630

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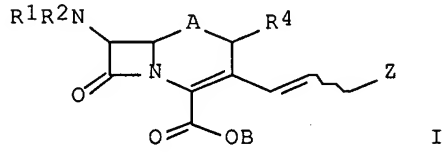
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

PRIORITY APPLN. INFO.: US 2001-261313P P 20010112
US 2002-44486 A2 20020111
US 2004-884019 A 20040702

OTHER SOURCE(S): MARPAT 143:22126

GI



I

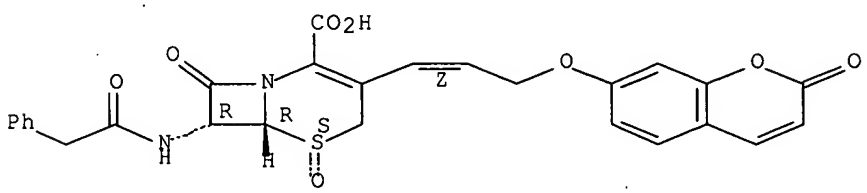
AB Provided are fluorescent substrates for β-lactamases having the general formula I (R1,R2 = H, benzyl, 2-thienylmethyl, cyanomethyl; B = H, physiol. acceptable salts or metal, ester groups, ammonium cations, -CHR5OCO(CH2)nCH3, -CHR5OCOC(CH3)3, acylthiomethyl, acyloxy-α- benzyl, δ-butyrolactonyl, methoxycarbonyloxymethyl, Ph, methylsulphinylmethyl, δ-morpholinoethyl, dialkylaminoethyl, dislkylaminocarbonyloxymethyl; R4,R5 = H, lower alkyl; A = S, O, SO, SO2, CH2; Z = a donor fluorescent moiety that links to the lactam-containing group' n = 0-10). VA new class of small fluorogenic substrates that work by releasing a phenolate from a vinylogous cephalosporin is reported. The β-lactam ring is cleaved by a β-lactamase enzyme effective to free a fluorophore. Methods of assaying β-lactamase activity and monitoring expression in systems using beta-lactamase as a reporter gene are also disclosed.

IT *852671-27-3P 852671-28-4P 852671-29-5P*
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(fluorogenic β-lactamase substrate containing phenolic dye and vinylogous cephalosporin, and use for monitoring β-lactamase reporter gene expression)

RN 852671-27-3 HCAPLUS

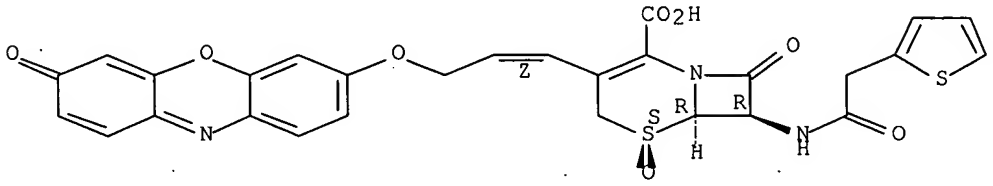
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 8-oxo-3-[(1Z)-3-[(2-oxo-2H-1-benzopyran-7-yl)oxy]-1-propenyl]-7-[(phenylacetyl)amino]-, 5-oxide, (5S,6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



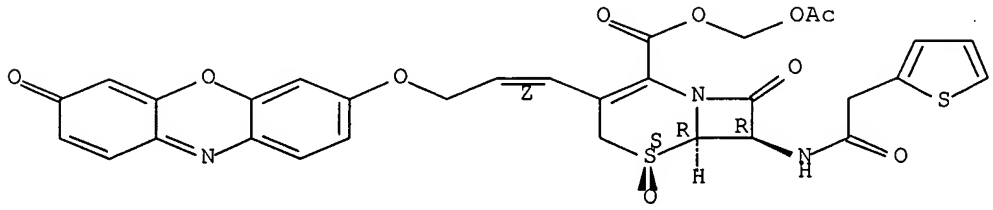
RN 852671-28-4 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 8-oxo-3-[(1Z)-3-[(3-oxo-3H-phenoxazin-7-yl)oxy]-1-propenyl]-7-[(2-thienylacetyl)amino]-, 5-oxide, (5S,6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



RN 852671-29-5 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 8-oxo-3-[(1Z)-3-[(3-oxo-3H-phenoxazin-7-yl)oxy]-1-propenyl]-7-[(2-thienylacetyl)amino]-, (acetyloxy)methyl ester, 5-oxide, (5S,6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



L61 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:239156 HCAPLUS Full-text
DOCUMENT NUMBER: 142:312727
TITLE: Fluorescent probe used for hydrolase assay
INVENTOR(S): Nagano, Tetsuo; Kamiya, Mako; Urano, Yasuteru
PATENT ASSIGNEE(S): Daiichi Pure Chemicals Co., Ltd., Japan
SOURCE: PCT Int. Appl., 54 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005024049	A1	20050317	WO 2004-JP13185	20040903
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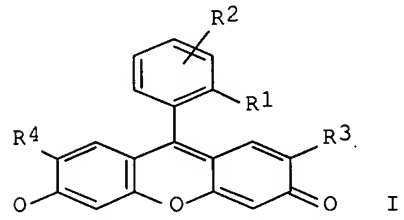
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1674579 A1 20060628 EP 2004-772924 20040903
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK

PRIORITY APPLN. INFO.: JP 2003-314041 A 20030905
WO 2004-JP13185 W 20040903

OTHER SOURCE(S): MARPAT 142:312727

GI



I

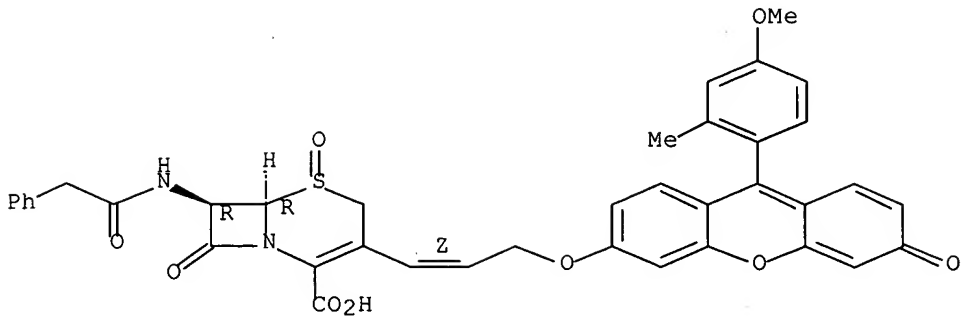
AB A novel fluorescent probe is provided, which is represented by the following formula (I), and is utilized for a fluorescence assay of a hydrolase. In the formula I, R1 represents a hydrogen atom, a carboxy group or a monovalent substituent other than a sulfonate group; R2 represents a hydrogen atom or a monovalent substituent; R3 and R4 each independently represents a hydrogen atom or a halogen atom; and R5 represents a monovalent group which is cleaved upon contact with a substance to be detected; provided that the combination of R1 and R2 is selected so that the benzene ring to which R1 and R2 are bound has such an oxidation potential that (1) the compound I has substantially no fluorescence before the cleavage; and (2) the resultant compound formed from I by the cleavage is substantially highly fluorescent after the cleavage.

IT *847978-57-8P*
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(fluorescent probe capable of generating fluorescence upon bond cleavage in hydrolase assay)

RN 847978-57-8 HCAPLUS

CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[(1Z)-3-[[9-(4-methoxy-2-methylphenyl)-3-oxo-3H-xanthen-6-yl]oxy]-1-propenyl]-8-oxo-7-[(phenylacetyl)amino]-, 5-oxide, (6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L61 ANSWER 4 OF 6 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:878473 HCAPLUS Full-text
DOCUMENT NUMBER: 141:389858
TITLE: reporting system for monitoring real-time gene expression events in live cells using fluorogenic substrates
INVENTOR(S): Xie, X. Sunney; Xiao, Jie; Cai, Long; Markson, Joseph Scott; Yu, Ji; Yin, Jlalu
PATENT ASSIGNEE(S): President and Fellows of Harvard College, USA; Regents of the University of California
SOURCE: PCT Int. Appl., 69 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004090104	A2	20041021	WO 2004-US10341	20040402
WO 2004090104	A3	20050303		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1616032	A2	20060118	EP 2004-749716	20040402
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				

PRIORITY APPLN. INFO.: US 2003-459897P P 20030402
WO 2004-US10341 W 20040402

AB The current invention provides a reporting system for monitoring real-time gene expression events in live cells using fluorogenic substrates. Modified β-galactosidase, β-glucosidase, β-lactamase with short maturation time and a short cellular lifetime are selected as reporter to detect transient gene

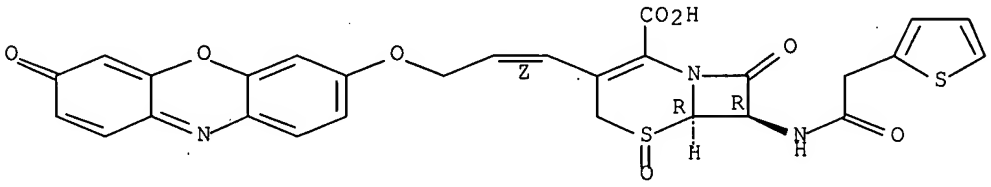
expression event in live cells. Gene expression signals are monitored by visible and UV spectrometry, and fluorometry.

IT *452280-30-7*, CR 2
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(CR 2; reporting system for monitoring real-time gene expression events in live cells using fluorogenic substrates)

RN 452280-30-7 HCAPLUS

CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 8-oxo-3-[(1Z)-3-[(3-oxo-3H-phenoxazin-7-yl)oxy]-1-propenyl]-7-[(2-thienylacetyl)amino]-, 5-oxide, (6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



L61 ANSWER 5 OF 6 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:643607 HCAPLUS Full-text

DOCUMENT NUMBER: 139:287990

TITLE: Novel Fluorogenic Substrates for Imaging β-Lactamase Gene Expression

AUTHOR(S): Gao, Wenzhong; Xing, Bengang; Tsien, Roger Y.; Rao, Jianghong

CORPORATE SOURCE: Department of Molecular and Medical Pharmacology, Crump Institute for Molecular Imaging, University of California, Los Angeles, CA, 90095-1770, USA

SOURCE: Journal of the American Chemical Society (2003), 125(37), 11146-11147
CODEN: JACSAT; ISSN: 0002-7863

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 139:287990

AB A new class of small nonfluorescent fluorogenic substrates, based on release of a phenolic dye from a vinylogous cephalosporin, becomes brightly fluorescent after β-lactamase hydrolysis with up to 153-fold enhancement in the fluorescence intensity. Less than 500 fM of β-lactamase in cell lysates can be readily detected, and β-lactamase expression in living cells can be imaged with a red fluorescence derivative These new fluorogenic substrates should find uses in clin. diagnostics and facilitate the applications of β-lactamase as a biosensor.

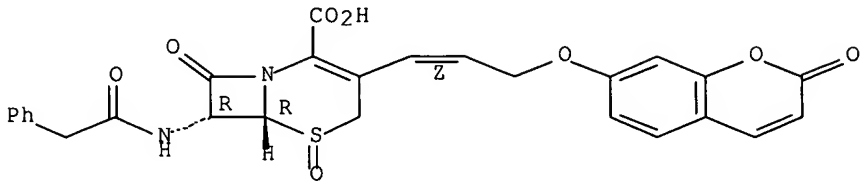
IT *609812-89-7P*
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(preparation of vinylogous cephalosporin fluorogenic substrates and use for detection of β-lactamase)

RN 609812-89-7 HCAPLUS

CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 8-oxo-3-[(1Z)-3-[(2-oxo-2H-1-benzopyran-7-yl)oxy]-1-propenyl]-7-

[(phenylacetyl)amino]-, 5-oxide, (6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

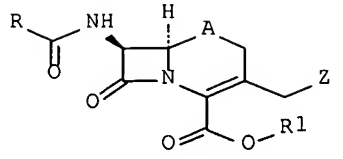


REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L61 ANSWER 6 OF 6 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:676218 HCAPLUS Full-text
DOCUMENT NUMBER: 137:197525
TITLE: β-Lactamase substrates having phenolic ethers and their use for β-lactamase determination
INVENTOR(S): Tsien, Roger Y.; Rao, Jianghong
PATENT ASSIGNEE(S): The Regents of the University of California, USA
SOURCE: PCT Int. Appl., 46 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002068678	A2	20020906	WO 2002-US769	20020111
WO 2002068678	A3	20031204		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2434679	A1	20020906	CA 2002-2434679	20020111
EP 1385853	A2	20040204	EP 2002-720779	20020111
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2005501806	T	20050120	JP 2002-568772	20020111
PRIORITY APPLN. INFO.:			US 2001-261313P P	20010112
			WO 2002-US769 W	20020111

OTHER SOURCE(S): MARPAT 137:197525
GI



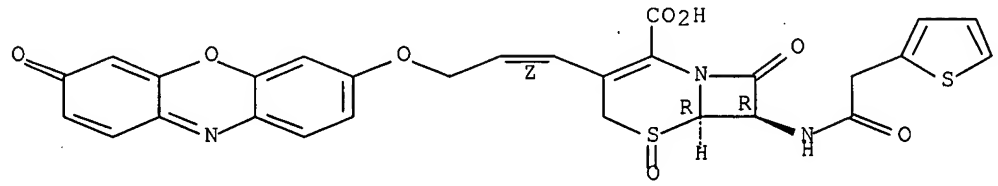
I

AB Provided are fluorescent β-lactamase substrates I (R = benzyl, 2-thienylmethyl, cyanomethyl; R1 = H, physiol. acceptable salts or metal, ester groups, ammonium cations, --CHR2OCO(CH2)nCH3, --CHR2OCOC(CH3)3, acylthiomethyl, acyloxy-α-benzyl, δ-butyrolactonyl, methoxycarbonyloxymethyl, Ph, methylsulphinylmethyl, β- morpholinoethyl, dialkylaminoethyl, dislkylaminocarbonyloxymethyl; R2 = H, lower alkyl; A = S, O, SO, SO2, CH2; Z = a donor fluorescent moiety). Also provided are methods of use of these compds. for β-lactamase determination

IT ***452280-30-7P 452280-31-8P 452280-32-9P***
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(β-Lactamase substrates having phenolic ethers and their use for β-lactamase determination)

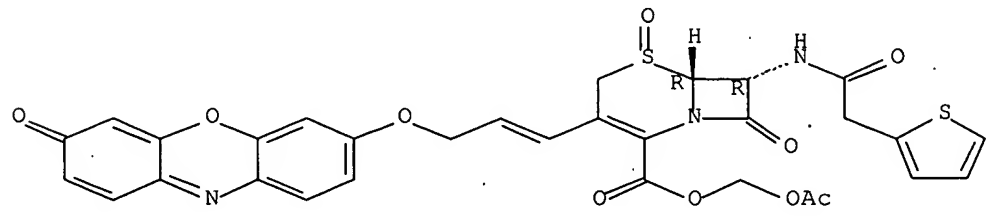
RN 452280-30-7 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 8-oxo-3-[(1Z)-3-[(3-oxo-3H-phenoxazin-7-yl)oxy]-1-propenyl]-7-[(2-thienylacetyl)amino]-, 5-oxide, (6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



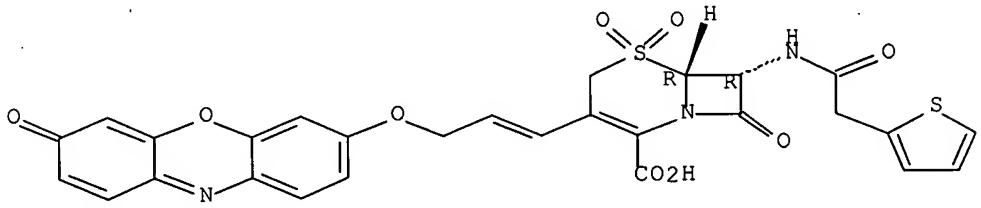
RN 452280-31-8 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 8-oxo-3-[3-[(3-oxo-3H-phenoxazin-7-yl)oxy]-1-propenyl]-7-[(2-thienylacetyl)amino]-, (acetyloxy)methyl ester, 5-oxide, (6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



RN 452280-32-9 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 8-oxo-3-[3-[(3-oxo-3H-phenoxazin-7-yl)oxy]-1-propenyl]-7-[(2-thienylacetyl)amino]-, 5,5-dioxide, (6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



HISTORY

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=> d his nofil

     (FILE 'HOME' ENTERED AT 13:54:44 ON 16 JAN 2007)

     FILE 'REGISTRY' ENTERED AT 13:54:54 ON 16 JAN 2007
L1             STR
L2           50 SEA SSS SAM L1
L3        81306 SEA SSS FUL L1
              SAVE TEMP L3 BERCH019/A

     FILE 'STNGUIDE' ENTERED AT 13:56:45 ON 16 JAN 2007

     FILE 'REGISTRY' ENTERED AT 14:02:39 ON 16 JAN 2007
              E CYANINE
              E CYANINE/CN
L4             2 SEA ABB=ON  PLU=ON  CYANINE/CN
              D SCA
L5             STR L1
L6            50 SEA SUB=L3 SSS SAM L5
L7             STR L5
L8             STR L7
L9            40 SEA SUB=L3 SSS SAM L8
L10          706 SEA SUB=L3 SSS FUL L8
L11            STR L8
L12          587 SEA SUB=L10 SSS FUL L11
L13          119 SEA ABB=ON  PLU=ON  L10 NOT L12
L14           57 SEA ABB=ON  PLU=ON  L13 AND C6/ES
L15            STR L8
L16            0 SEA SUB=L10 SSS FUL L15
L17           16 SEA ABB=ON  PLU=ON  L10 AND C6-C6/ES
L18           16 SEA ABB=ON  PLU=ON  L17 AND S/ELS
L19            9 SEA ABB=ON  PLU=ON  L17 AND S>1
              D SCA
L20            1 SEA ABB=ON  PLU=ON  L13 AND NC4-C6/ES
              D SCA
L21            6 SEA ABB=ON  PLU=ON  L13 AND N2C4-C6/ES
              D SCA
L22            8 SEA ABB=ON  PLU=ON  L13 AND NC5-C6/ES
              D SCA
L23            0 SEA ABB=ON  PLU=ON  L13 AND N2C3-N2C3/ES
L24            0 SEA ABB=ON  PLU=ON  L13 AND NC5-C6-C6/ES
L25            3 SEA ABB=ON  PLU=ON  L13 AND OC5-C6-C6/ES
              D SCA
L26            6 SEA ABB=ON  PLU=ON  L13 AND OC5-C6/ES
              D SCA
L27            0 SEA ABB=ON  PLU=ON  L26 AND NC5-C6-C6/ES
L28            0 SEA ABB=ON  PLU=ON  L13 AND NC5-C6-C6/ES
L29           11 SEA ABB=ON  PLU=ON  L13 AND NC2OC2-C6-C6/ES
L30            1 SEA ABB=ON  PLU=ON  L13 AND NC4-C6/ES
              D SCA
L31            0 SEA ABB=ON  PLU=ON  L13 AND OC4-C6/ES

     FILE 'HCAPLUS' ENTERED AT 14:37:38 ON 16 JAN 2007
L32           24 SEA ABB=ON  PLU=ON  L12

     FILE 'REGISTRY' ENTERED AT 14:38:11 ON 16 JAN 2007
L33            0 SEA ABB=ON  PLU=ON  L13 AND (EU OR TB)/ELS
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L35           1 SEA ABB=ON  PLU=ON  L25
L36           3 SEA ABB=ON  PLU=ON  L26
L37           5 SEA ABB=ON  PLU=ON  L29

     FILE 'HCAPLUS' ENTERED AT 14:39:32 ON 16 JAN 2007
               D QUE L32
               D L32 IBIB AB HITSTR TOT
               D QUE L34
               D QUE L35
               D QUE L36
               D QUE L37
L38           7 SEA ABB=ON  PLU=ON  (L34 OR L35 OR L36 OR L37)
               D L38 IBIB ABS HITSTR TOT
               D QUE L3
               DIS

     FILE 'REGISTRY' ENTERED AT 15:08:41 ON 16 JAN 2007
L39            STR L1
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L41           4 SEA SUB=L3 SSS SAM L40
L42          40 SEA SUB=L3 SSS FUL L40

     FILE 'HCAPLUS' ENTERED AT 15:15:59 ON 16 JAN 2007
L43          25 SEA ABB=ON  PLU=ON  L42

     FILE 'REGISTRY' ENTERED AT 15:16:05 ON 16 JAN 2007
L44          27 SEA ABB=ON  PLU=ON  L42 AND C6/ES
               D SCA
L45           0 SEA ABB=ON  PLU=ON  L42 AND NC5-C6-C6/ES
L46           0 SEA ABB=ON  PLU=ON  L42 AND N2C4-C6/ES
L47           0 SEA ABB=ON  PLU=ON  L42 AND NC4-C6/ES
L48           0 SEA ABB=ON  PLU=ON  L42 AND NC5-C6/ES
L49           0 SEA ABB=ON  PLU=ON  L42 AND C6-C6/ES
L50           0 SEA ABB=ON  PLU=ON  L42 AND N2C3-N2C3/ES
L51           1 SEA ABB=ON  PLU=ON  L42 AND OC5-C6-C6/ES
               D SCA
L52           2 SEA ABB=ON  PLU=ON  L42 AND OC5-C6/ES
               D SCA
L53           5 SEA ABB=ON  PLU=ON  L42 AND NC2OC2-C6-C6/ES
L54           0 SEA ABB=ON  PLU=ON  L42 AND NC4-C6/ES
L55           0 SEA ABB=ON  PLU=ON  L42 AND OC4-C6/ES
L56            STR
L57           4 SEA SUB=L42 SSS FUL L56
               D SCA

     FILE 'HCAPLUS' ENTERED AT 15:25:55 ON 16 JAN 2007
L58           1 SEA ABB=ON  PLU=ON  L51
L59           3 SEA ABB=ON  PLU=ON  L52
L60           4 SEA ABB=ON  PLU=ON  L53

     FILE 'HCAPLUS' ENTERED AT 15:26:16 ON 16 JAN 2007
               D QUE L58
               D QUE L59
               D QUE L60
L61           6 SEA ABB=ON  PLU=ON  (L58 OR L59 OR L60)
               D L61 IBIB ABS HITSTR TOT
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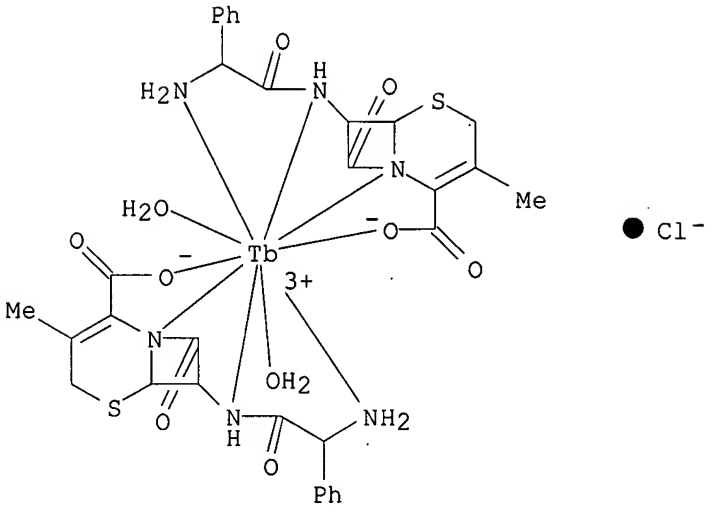
L63 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:646444 HCAPLUS
DOCUMENT NUMBER: 137:361886
TITLE: Studies of lanthanide(III) metal complexes of 7-(D-α-aminophenylacetamido)-3-methyl-3-cephem-4-carboxylic acid
AUTHOR(S): Pingalkar, S. R.; Deshpande, M. N.
CORPORATE SOURCE: P. G. Dep. of Chem., Science College, Nanded, 431 602, India
SOURCE: Asian Journal of Chemistry (2002), 14(3-4), 1459-1462
CODEN: AJCHEW; ISSN: 0970-7077
PUBLISHER: Asian Journal of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 137:361886
AB Eight new solid complexes of lanthanide(III) chlorides with 7-(D-α-aminophenylacetamido)-3-methyl-3-cephem-4-carboxylic acid (AAMCC) were synthesized. These complexes are characterized by elemental anal., UV (no data) and IR spectroscopies, magnetic moment, and solution conductivity data. Corrosion inhibitory effect of these complexes and study of antibacterial activity is also undertaken (no data). The IR spectral studies indicate that the ligand acts as tetradentate and it coordinates through amido, amino and ring N's and carboxylate O. The general formula of the complexes is [LnL2(H2O)2]Cl, where Ln = La(III), Ce(III), Pr(III), Nd(III), Sm(III), Gd(III), Tb(III) and Dy(III) and L = 7-(D-α-aminophenylacetamido)-3-methyl-3-cephem-4-carboxylate. The coordination number of the central metal ion is 10. An inhibitory study on the corrosion of steel alloy in a solution of HNO3 by the complexes was done. Inhibitor concns. of 0.5 to 2% in 0.5 N HNO3 were used, and inhibitory efficiency increased in the order metal chloride < ligand < complex. Antibacterial activity of AAMCC ligand increased upon complexation with lanthanides (no data).
IT ***474900-63-5P***
RL: BSU (Biological study, unclassified); SPN (Synthetic preparation); TEM (Technical or engineered material use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation, corrosion inhibitor activity of steel alloy in nitric acid, and bactericidal activity of)
RN 474900-63-5 HCAPLUS
CN Terbium(1+), bis[7-[[(amino-κN)phenylacetyl]amino-κN]-3-methyl-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylato-κN1,κO2]diaqua-, chloride (9CI) (CA INDEX NAME)

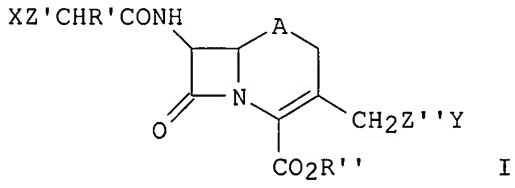


REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L63 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1999:606991 HCAPLUS
DOCUMENT NUMBER: 131:225488
TITLE: Fluorogenic β-lactam preparation and β-lactamase reporter gene assay for animal cell transcription, transfection, or antibiotic resistance
INVENTOR(S): Tsien, Roger Y.; Zlokarnik, Gregor
PATENT ASSIGNEE(S): The Regents of the University of California, USA
SOURCE: U.S., 58 pp., Cont. of U. S. Ser. No. 727,616.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 5955604	A	19990921	US 1997-955401		19971021
US 6291162	B1	20010918	US 1996-727616		19961015
PRIORITY APPLN. INFO.:			US 1996-727616	A1	19961015
			US 1996-732178	A1	19961016
			US 1995-407544	A2	19950320
			WO 1996-US4059	W	19960320

OTHER SOURCE(S): MARPAT 131:225488
GI



I

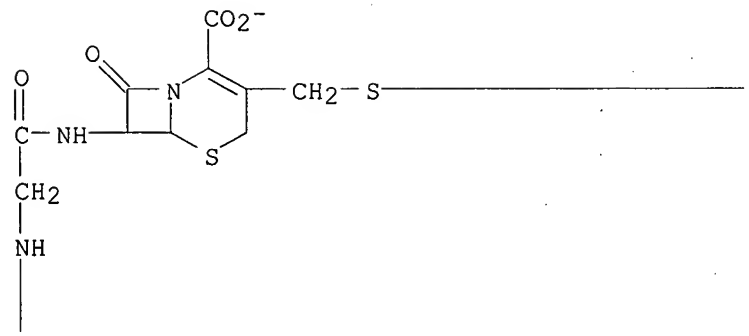
AB Substrates for β-lactamase are provided of the general formula I in which one of X and Y is a fluorescent donor moiety and the other is a quencher (which may or may not re-emit); R' is selected from the group consisting of H, lower (i.e., alkyl of 1 to about 5 carbon atoms) and (CH2)nOH, in which n is 0 or an integer from 1 to 5; R" is selected from the group consisting of H, physiol. acceptable metal and ammonium cations, -CHR2OCO(CH2)nCH3, -CHR2OCOC(CH3)3, acylthiomethyl, acyloxy-α-benzyl, δ-butyrolactonyl, methoxycarbonyloxymethyl, Ph, methylsulfinylmethyl, β-morpholinoethyl, dialkylaminoethyl, acyloxyalkyl, dialkylaminocarbonyloxymethyl and aliphatic, in which R2 is selected from the group consisting of H and lower alkyl; A is selected from the group consisting of S, O, SO, SO2 and CH2 ; and Z' and Z" are linkers for the fluorescent donor and quencher moieties. Methods of assaying β-lactamase activity and monitoring expression in systems using β-lactamase as a reporter gene also are disclosed. Examples include Drosophila or zebrafish embryo transformation assays as well as animal cell glucocorticoid receptor-mediated or β-adrenergic receptor-mediated transcription assays.

IT ***183736-87-0***
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(fluorogenic β-lactam preparation and β-lactamase reporter gene assay for animal cell transcription, transfection, or antibiotic resistance)

RN 183736-87-0 HCAPLUS

CN Europate(2-), [μ-[10-[[[2-[[2-carboxy-8-oxo-3-[[(9,16,23-trisulfo-29H,31H-phthalocyanin-2-yl)thio]methyl]-5-thia-1-azabicyclo[4.2.0]oct-2-en-7-yl]amino]-2-oxoethyl]amino]carbonyl]-1,14,39,40,41,42,43,44-octaazaoctacyclo[12.12.12.13,7.18,12.116,20.121,25.128,32.133,37]tetratetraconta-3,5,7(44),8,10,12(43),16,18,20(42),21,23,25(41),28,30,32(40),33,35,37(39)-octadecaene-5-carboxylato(8-)-N1,N14,N39,N40,N41,N42,N43,N44:N29,N30,N31,N32]](hydroxyaluminate)- (9CI) (CA INDEX NAME)

PAGE 1-A



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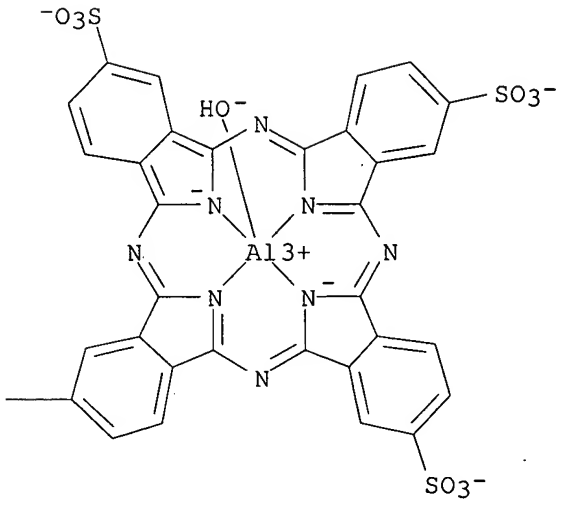

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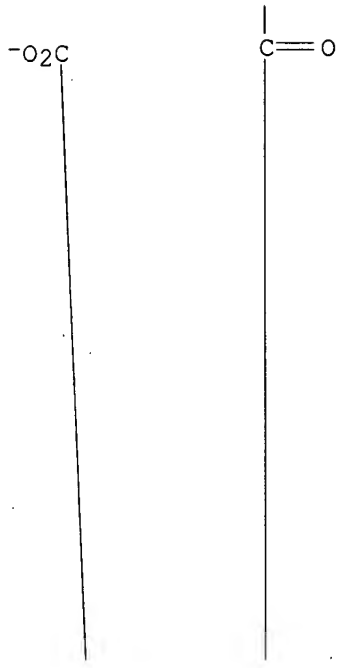

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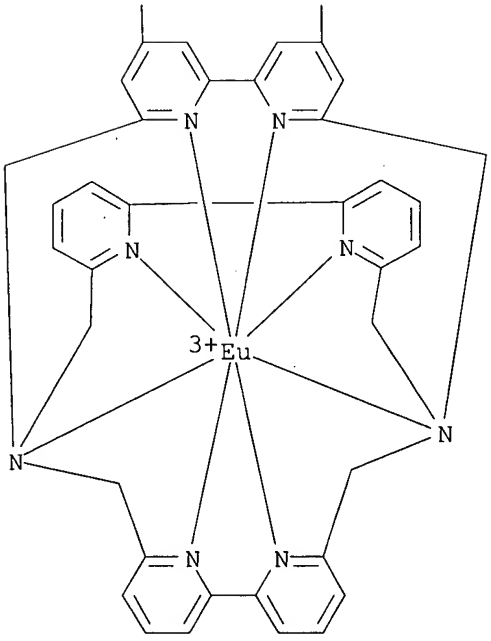

REFERENCE COUNT: 83 THERE ARE 83 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L63 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1996:731813 HCAPLUS
DOCUMENT NUMBER: 126:3785
TITLE: Fluorogenic β-lactam preparation and β-lactamase reporter gene assay for animal cell transcription, transfection, or antibiotic resistance
INVENTOR(S): Tsien, Roger Y.; Zlokarnik, Gregor
PATENT ASSIGNEE(S): University of California, USA
SOURCE: PCT Int. Appl., 118 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9630540	A2	19961003	WO 1996-US4059	19960320
WO 9630540	A3	19970109		
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AU 9655266	A	19961016	AU 1996-55266	19960320
AU 723164	B2	20000817		
EP 817785	A2	19980114	EP 1996-912454	19960320
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ES 2156994	T3	20010801	ES 1996-912454	19960320
AT 253632	T	20031115	AT 1999-118473	19960320
PT 982398	T	20040227	PT 1999-118473	19960320
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CN 1296078	A	20010523	CN 2000-122761	20000808
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JP 2005021172	A	20050127	JP 2004-305450	20041020
JP 3856807	B2	20061213		

PRIORITY APPLN. INFO.: US 1995-407544 A2 19950320
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US	1996-727616	A1 19961015
EP	1999-118473	A3 19990917
US	2000-481756	A1 20000111

OTHER SOURCE(S): MARPAT 126:3785

AB Fluorogenic β-lactam substrates are useful for detecting expression of the reporter gene, β-lactamase gene. Synthetic β-lactamase substrates with a fluorescent donor moiety in addition to a quencher moiety (which may or may not re-emit) are prepared and characterized. Synthetic substrates may include groups which are alkyl of 1 to about 5 carbon atoms or (CH2)nOH, in which n is 0 or an integer from 1 to 5. Synthetic substrates also may include physiol. acceptable metal and ammonium cations, -CHR2OCO(CH2)nCH3, -CHR2OCOC(CH3)3, acylthiomethyl, acyloxy-α-benzyl, δ-butyrolactonyl, methoxycarbonyloxymethyl, Ph, methylsulphinylmethyl, β-morpholinoethyl, dialkylaminoethyl, acyloxyalkyl, and dialkylaminocarbonyloxymethyl groups. S, O, SO, SO2 and CH2 as well as linkers for the fluorescent donor and quencher moieties are also included in synthetic β-lactamase substrates. Methods of assaying β-lactamase activity and monitoring expression in systems using β-lactamase as a reporter gene also are disclosed. Examples include Drosophila or zebrafish embryo transformation assays as well as animal cell glucocorticoid receptor-mediated or β-adrenergic receptor-mediated transcription assays.

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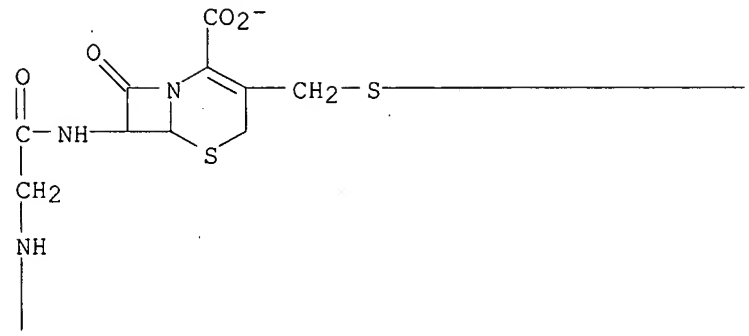

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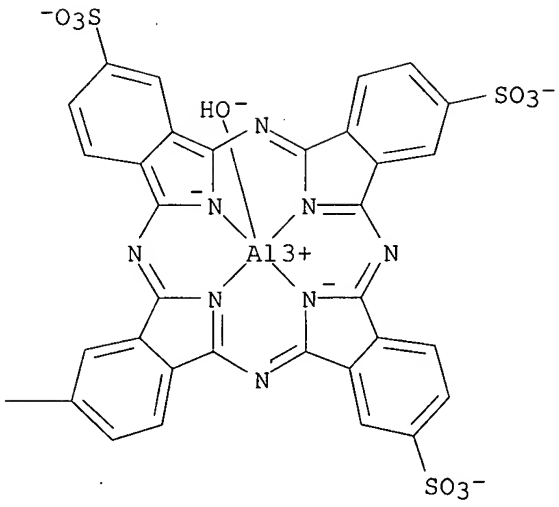

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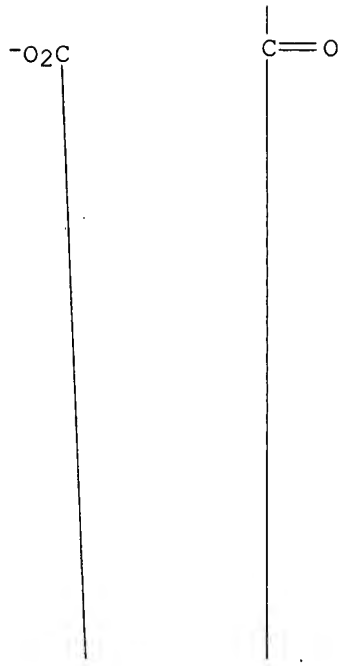

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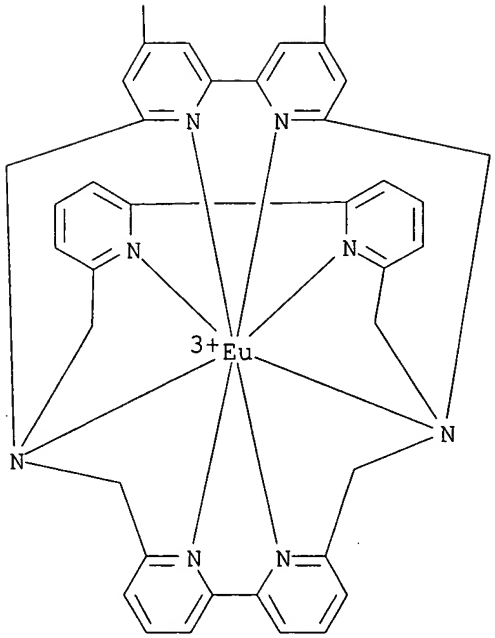

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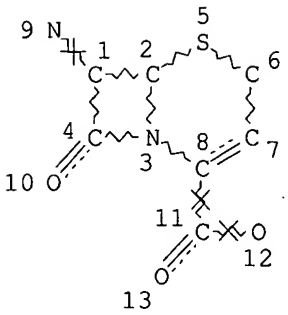

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STEREO ATTRIBUTES: NONE
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